Section 1. Identification

1.1 Product identifier
Product name : IntraStain Reagent A, Fixative
Part no. : K2311
Validation date : 7/29/2019

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses : Laboratory use
Container type: vial
K2311 // IntraStain Reagent A, Fixative // IntraStain // 10 mL
Reference number: SDS172

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer : Dako North America, Inc.
6392 Via Real
Carpinteria, California 93013
United States
Tel: (805) 566-6655
www.Agilent.com

e-mail address of person responsible for this SDS : SDS@Agilent.com

1.4 Emergency telephone number
In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture
H302 ACUTE TOXICITY (oral) - Category 4
H331 ACUTE TOXICITY (inhalation) - Category 3
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H317 SKIN SENSITIZATION - Category 1
H341 GERM CELL MUTAGENICITY - Category 2
H350 CARCINOGENICITY - Category 1A
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

2.2 GHS label elements
Hazard pictograms : 

Signal word : Danger

Date of issue : 07/29/2019
Section 2. Hazards identification

Hazard statements:
- H331 - Toxic if inhaled.
- H302 - Harmful if swallowed.
- H319 - Causes serious eye irritation.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H350 - May cause cancer.
- H341 - Suspected of causing genetic defects.
- H335 - May cause respiratory irritation.

Precautionary statements:

Prevention:
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
- P271 - Use only outdoors or in a well-ventilated area.
- P261 - Avoid breathing vapor.
- P270 - Do not eat, drink or smoke when using this product.
- P264 - Wash hands thoroughly after handling.
- P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.

Response:
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician.
- P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- P333 + P313 - If skin irritation or rash occurs: Get medical attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.

Storage:
- P405 - Store locked up.

Disposal:
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 Other hazards
Hazards not otherwise classified:
- None known.

Section 3. Composition/information on ingredients

Substance/mixture:
- Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>≤10</td>
<td>50-00-0</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.
Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Causes serious eye irritation.

Inhalation: Toxic if inhaled. May cause respiratory irritation.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following: pain or irritation, watering, redness.

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing.

Skin contact: Adverse symptoms may include the following: irritation, redness.

Ingestion: No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

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Section 4. First aid measures

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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Section 7. Handling and storage

7.1 Precautions for safe handling

**Protective measures**: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Specific storage conditions: Please consult the label. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

**Recommendations**: Industrial applications, Professional applications.

**Industrial sector specific solutions**: Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td><strong>ACGIH TLV (United States, 3/2018)</strong>. Skin sensitizer. Inhalation sensitized.</td>
</tr>
<tr>
<td></td>
<td>STEL: 0.3 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td><strong>OSHA PEL 1989 (United States, 3/1989)</strong>.</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.75 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 2 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td><strong>OSHA PEL Z2 (United States, 2/2013)</strong>.</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.75 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 2 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td><strong>NIOSH REL (United States, 10/2016)</strong>.</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.016 ppm 10 hours.</td>
</tr>
<tr>
<td></td>
<td>CEIL: 0.1 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td><strong>OSHA PEL (United States, 5/2018)</strong>.</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.75 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 2 ppm 15 minutes.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

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Section 8. Exposure controls/personal protection

Appropriate engineering controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: Liquid.
Color: Colorless.
Odor: Formaldehyde.
Odor threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: 100°C (212°F)
Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: 1
Solubility: Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability: The product is stable.
10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid: No specific data.
10.5 Incompatible materials: May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>578 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>270 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>100 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 750 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>750 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 50 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 2 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization
Not available.

Mutagenicity

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Section 11. Toxicological information

Conclusion/Summary

Carcinogenicity

Conclusion/Summary: Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>+</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Known to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary: Not available.

Teratogenicity

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact: Causes serious eye irritation.
Inhalation: Toxic if inhaled. May cause respiratory irritation.
Skin contact: Causes skin irritation. May cause an allergic skin reaction.
Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing.
Skin contact: Adverse symptoms may include the following: irritation, redness.
Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.
Potential delayed effects: Not available.
Section 11. Toxicological information

**Long term exposure**
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

**Potential chronic health effects**
- **General**: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- **Carcinogenicity**: May cause cancer. Risk of cancer depends on duration and level of exposure.
- **Mutagenicity**: Suspected of causing genetic defects.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IntraStain Reagent A, Fixative</td>
<td>1111.1 100</td>
<td>3000 270</td>
<td>N/A</td>
<td>6.4 0.578</td>
<td>N/A</td>
</tr>
<tr>
<td>Formaldehyde, solution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 12. Ecological information

**12.1 Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>Acute EC50 3.48 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 3.05 mg/l Marine water</td>
<td>Algae - Isochrysis galbana - Exponential growth phase</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 12.98 mg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia dubia - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 5800 µg/l Fresh water</td>
<td>Daphnia - Daphnia pulex - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1.41 ppm Fresh water Chronic NOEC 953.9 ppm Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fish - Oncorhynchus shawytscha - Egg</td>
<td>43 days</td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>OECD 301A Ready Biodegradability - DOC Die-Away Test 301D Ready Biodegradability - Closed Bottle Test</td>
<td>99 % - Readily - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 % - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Date of issue : 07/29/2019
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>0.35</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>): Not available.

12.5 Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>Listed</td>
<td>U122</td>
</tr>
</tbody>
</table>

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA: Not regulated.

Additional information

DOT Classification: Reportable quantity 1111.1 lbs / 504.44 kg [133.26 gal / 504.44 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

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10/13
Section 14. Transport information

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations: TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 311: Formaldehyde, solution

Clean Air Act (CAA) 112 regulated toxic substances: Formaldehyde, solution

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ (lbs)</th>
<th>SARA 304 RQ (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, solution</td>
<td>≤10</td>
<td>Yes.</td>
<td>500</td>
<td>73.9</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>&lt;0.1</td>
<td>Yes.</td>
<td>500</td>
<td>-</td>
</tr>
</tbody>
</table>

SARA 304 RQ: 1111.1 lbs / 504.4 kg [133.3 gal / 504.4 L]

Classification: ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 3
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Composition/information on ingredients

Date of issue: 07/29/2019
Section 15. Regulatory information

### SARA 313

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Formaldehyde, solution | 50-00-0    | ≤10| FLAMMABLE LIQUIDS - Category 4  
|                        |            |    | ACUTE TOXICITY (oral) - Category 3  
|                        |            |    | ACUTE TOXICITY (dermal) - Category 3  
|                        |            |    | ACUTE TOXICITY (inhalation) - Category 2  
|                        |            |    | SKIN CORROSION - Category 1B  
|                        |            |    | SERIOUS EYE DAMAGE - Category 1  
|                        |            |    | SKIN SENSITIZATION - Category 1  
|                        |            |    | GERM CELL MUTAGENICITY - Category 2  
|                        |            |    | CARCINOGENICITY - Category 1A  
|                        |            |    | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
|                        |            |    | HNOC - Corrosive to digestive tract  

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- **Massachusetts**: The following components are listed: FORMALDEHYDE; FORMALIN
- **New York**: The following components are listed: Formaldehyde
- **New Jersey**: The following components are listed: FORMALDEHYDE; FORMALIN
- **Pennsylvania**: The following components are listed: FORMALDEHYDE

**California Prop. 65**

⚠️ **WARNING**: This product can expose you to Formaldehyde, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

### Ingredient name

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>Yes.</td>
<td>-</td>
</tr>
</tbody>
</table>

### International regulations

- **Chemical Weapon Convention List Schedules I, II & III Chemicals**: Not listed.
- **Montreal Protocol**: Not listed.
- **Stockholm Convention on Persistent Organic Pollutants**: Not listed.
- **UNECE Aarhus Protocol on POPs and Heavy Metals**: Not listed.
- **Inventory list**:  
  - **Australia**: Not determined.  
  - **Canada**: Not determined.

**Date of issue**: 07/29/2019
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Europe</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>
| Japan              | Japan inventory (ENCS): Not determined.  
|                    | Japan inventory (ISHL): Not determined.   |
| New Zealand        | Not determined.        |
| Philippines        | Not determined.        |
| Republic of Korea  | Not determined.        |
| Taiwan             | Not determined.        |
| Thailand           | Not determined.        |
| Turkey             | Not determined.        |
| United States      | Not determined.        |
| Viet Nam           | Not determined.        |

Section 16. Other information

History
- Date of issue: 07/29/2019
- Date of previous issue: 07/26/2016
- Version: 3

Key to abbreviations:
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- N/A = Not available
- UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUTE TOXICITY (oral) - Category 4</td>
<td>Calculation method</td>
</tr>
<tr>
<td>ACUTE TOXICITY (inhalation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>GERM CELL MUTAGENICITY - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 1A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Indicates information that has changed from previously issued version.

Notice to reader
Discretionary: The information contained in this document is based on Dako state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.